

CENTER FOR HEALTHCARE EDUCATION AND STUDIES

MT2K SURVEYS REGARDING COMPUTER LITERACY FREQUENCY TABLES

HR00-001C

OCTOBER 2000

20001102 135



UNITED STATES ARMY
MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS 78234-6125

CENTER FOR HEALTHCARE EDUCATION AND STUDIES (CHES)

MEDIC TRAINING 2000 (MT2K) SURVEYS REGARDING COMPUTER LITERACY

FREQUENCY TABLES

CATHERINE R. STEIN, MS
Statistician (Programmer)

AMEDD Studies and Analysis Branch

MARY MAYS, PhD Project Statistician Litton PRC Inc.

CYNTHIA A. ABBOTT, COL, RN, PhD
Principal Investigator

BARBARA WOJCIK, GM-13, PhD Supervisory Statistician

AMEDD Studies and Analysis Branch

HR00-001C OCTOBER 2000

UNITED STATES ARMY
MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS 78234-6100

NOTICE

The findings in this report are not to be construed as an official Department of the Defense position unless so designated by other authorized documents.

Address of authors' organizations:

Center for Healthcare Education and Studies (CHES) ATTN: MCCS-HRC AMEDDC&S 1608 Stanley Road, Building 2268 Fort Sam Houston, Texas 78234-6125

Litton PRC Inc. 16500 San Pedro Avenue Suite 302 San Antonio, Texas 78232

* * * * * * * * * * * *

Reports may be purchased directly from the following:

Defense Technical Information Center (DTIC) ATTN: DTIC-DDR Cameron Station Alexandria, VA 22304-6145

Telephones: DSN 284-7633, 4, or 5 Commercial (703) 274-7633, 4, or 5

U.S. Department of Commerce National Technical Information Service (NTIS) 5285 Port Royal Road Springfield, VA 22161

Telephone: Commercial (703) 487-4600

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing this burden, to Washington to Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Artination, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

Davis Highway, Suite 1204, Arlington, VA 223	202-4302, and to the Office of Management an	d Budget, Paperwork Reduction Pi	roject (0704-0188), Washington, DC 20303.								
1. AGENCY USE ONLY (Leave blan	2. REPORT DATE 10 October 2000	3. REPORT TYPE AND Supplement 28 S	DATES COVERED Sep 98 to 1 Apr 2000								
4. TITLE AND SUBTITLE MEDIC Training 2000 (MT2K) Tables	Surveys Regarding Computer L		5. FUNDING NUMBERS								
6. AUTHOR(S) Catherine R. Stein MS; Mary M Investigator; Barbara Wojcik Ph	fays PhD; COL Cynthia A. Abb	ott RN, PhD Principal									
7. PERFORMING ORGANIZATION N	NAME(S) AND ADDRESS(ES)		8. PERFORMING ORGANIZATION REPORT NUMBER								
AMEDD Studies and Analysis I 1608 Stanley Road Bldg 2268	nter for Healthcare Education and Studies (CHES) MEDD Studies and Analysis Branch 08 Stanley Road Bldg 2268 rt Sam Houston, TX 78234-6125 SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)										
9. SPONSORING / MONITORING A United States Army Medical De 3151 Scott Road Fort Sam Houston, TX 78234-6	partment Center and School	5)	10. SPONSORING / MONITORING AGENCY REPORT NUMBER								
11. SUPPLEMENTARY NOTES											
COMPLIANCE: Investigators 89) and the "Ethical Principles of	adhered to the guidelines of Arm of Psychologists and Code of Con	y Regulations 40-38, C	Clinical Investigation Program (1 Se								
12a. DISTRIBUTION / AVAILABILIT	Y STATEMENT		12b. DISTRIBUTION CODE								
Approved for public release; dis	stribution unlimited										
13. ABSTRACT (Maximum 200 w	ords)										
readiness of combat medics in p Individual Training of combat n training package on combat med unit training programs. The cur administered during Phases I an on-the-job access to computers, installations and consisted of con-	erforming core life-saving skills nedic students (Phase II), determ lic readiness (Phase III), and test trent report is concerned only wi d III. Questions covered profici- and the types of computer system	(Phase I), examined an ined the effect of a self- ed the feasibility of a meth computer-related queency of combat medics in available to them. Reference (n=347), their d	R00-001A). The study assessed the alternative method for Advance directed multi-media sustainment method for measuring effectiveness estions that were asked in surveys in performing computer skills, their Respondents were located at four direct-line supervisors (n=255), and tables.								
14. SUBJECT TERMS			15. NUMBER OF PAGES 18								
Military Medic Training, Comp	uter Literacy, Computer Resour	ces, Confidence in Skill									
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFIC OF ABSTRACT									
U	U	U	UL								

TABLE OF CONTENTS

Disclaimer	i
Report Documentation Page (SF 298) i	
TABLE OF CONTENTS i	V
INTRODUCTION	1
METHOD	1
RESULTS AND DISCUSSION	5
DISTRIBUTION LIST	4

INTRODUCTION

Recently, the AMEDD Studies and Analysis Branch, Center for Healthcare Education and Studies (CHES), Fort Sam Houston, Texas, completed a study entitled "MEDIC Training 2000 (MT2K)" (see CHES Report #HR00-001B, April 2000). The study assessed the readiness of combat medics in performing core life-saving skills (Phase I), examined an alternative method for advanced individual training of combat medic students (Phase II), determined the effect of a self-directed multi-media sustainment training package on combat medic readiness (Phase III), and tested the feasibility of a method for measuring the effectiveness of unit training programs.

The current report summarizes results not included in the final study report. It is concerned only with computer-related questions that were asked in surveys administered in Phases I and III of the study. The questions covered proficiency of combat medics in performing computer skills, their on-the-job access to computers, and the types of computer systems available to them.

METHOD

Experienced combat medics (n=347) and their direct-line supervisors (n=255) were surveyed in Phase I. New combat medics (n=127) were surveyed in Phase III. Experienced combat medics had a minimum of one year of experience since graduating from the 91B10 medic course. New combat medics had less than one year of experience and were among the newly graduated students from Phase II of the MT2K study. There were four study sites in Phases I and III: Fort Bragg, North Carolina; Fort Carson, Colorado; Fort Hood, Texas; and Fort Lewis, Washington.

The combat medics and direct-line supervisors were surveyed regarding barriers to sustainment training, available resources for sustainment training, and the perceived preparation of combat medics to perform in a combat mission. Survey instruments consisted of (1) the Experienced Combat Medic Questionnaire (Phase I), (2) the Combat Medic Direct-Line Supervisor Questionnaire (Phase I), and (3) the Experienced Combat Medic Questionnaire (Phase III). Two to three computer-related questions were on each of these surveys.

All questionnaires used closed-ended questions. Half of these questions were presented in the simplest (yes, no, don't know) format, or just as a dichotomous (yes, no) scale. There were questions about the total number of computer systems available in each unit. Questions concerning computer skills were designed on a 5-point numerical scale.

This report consists of simple frequency distributions. Combat medic responses were tabulated by study location and overall. However, since no identifying information was collected on the direct-line supervisor surveys, their responses were only tabulated overall.

The computer-related questions as they appeared on the original surveys are shown below by study phase and respondent group.

Phase I: Experienced Combat Medic

- 15. In performing your job, do you have access to a computer? (Circle one number)
 - 1. Yes
 - 2. No
- 16. From options 1 through 5 below, select your proficiency in performing computer skills listed below.

Options:

- 1. Unable to perform
- 2. Perform with continuous assistance
- 3. Perform with moderate assistance
- 4. Perform with minimal assistance
- 5. Proficient in computer skills, no assistance needed

Co	mputer Skills	Circle one number							
a.	Use E-mail to send and receive messages	1	2	3	4	5			
b.	Word processing programs such as Word or Word Perfect	1	2	3	4	5			
C.	Surf the Internet	1	2	3	4	5			
d.	Operate hospital automated systems such as CHCS (Composite Health Care System)	1	2	3	4	5			

Computer Systems. Please identify the types of computer systems available to 91B10 medics in <u>your unit</u>. This information will be used to understand the possibility of delivering distance learning training to the medic.

50. Please describe the types of computer systems available for you to use in your unit. Circle Yes, No, or UK (don't know) and fill in the blanks below.

Circle one letter for each category

		How many	LAI	LAN/Modem			<u>Internet</u>				<u>CD-ROM</u>			
a.	386		Yes	No	UK	Yes	No	UK		Yes	No	UK		
b.	486		Yes	No	UK	Yes	No	UK		Yes	No	UK		
c.	Pentium		Yes	No	UK	Yes	No	UK		Yes	No	UK		

Phase I: Direct-Line Supervisor

7. From options 1 through 5 below, select your 91B10 medic's proficiency in performing computer skills listed below.

Options:

- 1. Unable to perform
- 2. Perform with continuous assistance
- 3. Perform with moderate assistance
- 4. Perform with minimal assistance
- 5. Proficient in computer skills, no assistance needed

Co	mputer Skills	<u>Circle</u>	one num	<u>ıber</u>		
a.	Use E-mail to send and receive messages	1	2	3	4	5
b.	Word processing programs such as Word or Word Perfect	1	2	3	4	5
c.	Surf the Internet	1	2	3	4	5
d.	Operate hospital automated systems such as CHCS (Composite Health Care System)	1	2	3	4	5

Computer Systems. Please identify the types of computer systems available to 91B10 medics in <u>your unit</u>. This information will be used to understand the possibility of delivering distance learning training to the medic.

50. Please describe the types of computer systems available for you to use in your unit. Circle Yes, No, or UK (don't know) and fill in the blanks below.

Circle one letter for each category

	How many	LAN/Modem	<u>Internet</u>	<u>CD-ROM</u>
a. 386		Yes No Uk	Yes No UK	Yes No UK
b. 486		Yes No U	Yes No UK	Yes No UK
c. Pentium	ı	Yes No U	Yes No UK	Yes No UK

Phase III: New Combat Medics

Proficiency is the knowledge and skill to perform to a standard safely without assistance of supervision.

6. From options 1 through 5 below, select your proficiency in performing computer skills listed below.

Options:

- 1. Unable to perform
- 2. Perform with continuous assistance
- 3. Perform with moderate assistance
- 4. Perform with minimal assistance
- 5. Proficient in computer skills, no assistance needed

<u>Co</u>	mputer Skills	Circle one number								
a.	Use E-mail to send and receive messages	1	2	3	4	5				
b.	Word processing programs such as Word or Word Perfect	1	2	3	4	5				
c.	Surf the Internet	1	2	3	4	5				
d.	Operate hospital automated systems such as CHCS (Composite Health Care System)	1	2	3	4	5				

Computer Systems. Please identify the types of computer systems available to 91B10 medics in <u>your unit</u>. This information will be used to understand the possibility of delivering distance learning training to the medic.

48. Please describe the types of computer systems available for you to use in your unit. Circle Yes, No, or UK (don't know) and fill in the blanks below.

Circle one letter for each category

	How many	LAN/Modem	<u>Intern</u>	<u>iet</u>	CD-F	ROM
a. 386		Yes No U	K Yes N	o UK	Yes 1	No UK
b. 486	_	Yes No U	K Yes N	o UK	Yes 1	No UK
c. Pentium	ı	Yes No U	K Yes N	o UK	Yes]	No UK

RESULTS AND DISCUSSION

Responses to the questions concerning use of computers and computer literacy are summarized in the following tables by study phase and respondent group. Note that in each table, "No." refers to the number of respondents having the given answer marked; "%" refers to the percentage of responses in the column. In some of the tables, "Missing" is shown in the listing of responses. "Missing" means that some respondents left that question unanswered. If "Missing" is not shown, then all respondents answered the question.

Phase I: Experienced Combat Medics (n=347)

In Table 1, 62% of the experienced combat medics at Fort Bragg answered "Yes" to having access to a computer, while about 48% answered "Yes" at the other three study sites. Overall, 51% of all 347 experienced combat medics answered "Yes" compared to 47% who said "No" to having access.

Table 1. Experienced combat medics' on-the-job access to computers (Q15).

	Fort	Bragg	Fort	Carson	Fort	Hood	Fort	Lewis	To	tal
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Missing	0	(0.0)	3	(3.9)	2	(1.6)	2	(2.7)	7	(2.0)
Yes	44	(62.0)	37	(48.7)	60	(47.2)	36	(49.3)	177	(51.0)
No	27	(38.0)	36	(47.4)	65	(51.2)	35	(48.0)	163	(47.0)

Tables 2-5 summarize the responses to question 16 concerning experienced medics' perceptions of their computer proficiency. Overall, at least 30% of medics rated themselves as needing minimal or no assistance in performing the given computer skills: 51.6% in using E-mail (Table 2); 55.6% in word processing (Table 3); 55.3% in using Internet (Table 4); and 30.6% in operating hospital automated systems (Table 5). Also, overall, at least 40% of medics felt they needed more than minimal assistance. For example, to use E-mail to send and receive messages (Table 2), 51.6% rated themselves as needing minimal or no assistance (17% needed minimal assistance, 34.6% needed no assistance). However, 47% of the experienced combat medics felt they needed more than minimal assistance: 28.3% felt they were unable to perform the task, 6.6% needed continuous assistance, and 12.1% needed moderate assistance. By study location, the percent needing more than minimal assistance ranged from 43.7% at Fort Bragg to 49.3% at Fort Lewis. At Fort Carson, more than a third of the medics (34.2%) rated themselves as unable to use E-mail to send and receive messages.

Table 2. Self-rated proficiency of experienced combat medics in using E-mail to send/receive messages (Q16a).

	Fort Bragg		Fort Carson		Fort Hood		Fort Lewis		Total	
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)_	No.	(%)
Missing	0	(0.0)	3	(4.0)	1	(0.8)	1	(1.4)	5	(1.4)
Unable to perform	18	(25.3)	26	(34.2)	33	(26.0)	21	(28.8)	98	(28.3)
Perform w/continuous assistance	6	(8.5)	3	(4.0)	7	(5.5)	7	(9.6)	23	(6.6)
Perform w/moderate assistance	7	(9.9)	8	(10.5)	19	(15.0)	8	(10.9)	42	(12.1)
Perform w/minimal assistance	14	(19.7)	12	(15.8)	19	(15.0)	14	(19.2)	59	(17.0)
Proficient, no assistance needed	26	(36.6)	24	(31.6)	48	(37.8)	22	(30.1)	120	(34.6)

Following are some additional comments concerning Tables 3-5. Experienced medics rating themselves as needing minimal or no assistance in using word processing programs (Table 3) varied by study location: Fort Bragg, 62%; Fort Carson, 46.1%; Fort Hood, 56.7%; and Fort Lewis, 57.5%. Responses by study location for needing minimal or no assistance in surfing the Internet (Table 4) were almost the same as those for word processing: Fort Bragg, 61.9%; Fort Carson, 44.8%; Fort Hood, 56.7%; and Fort Lewis, 57.6%. Experienced combat medics rated themselves poorest in operating hospital automated systems (Table 5). Less than a third (30.6%) of all medics felt they could operate hospital automated systems with minimal or no assistance, ranging from 43.6% at Fort Bragg to 23.3% at Fort Lewis.

Table 3. Self-rated proficiency of experience combat medics in using word processing programs such as Word or WordPerfect. (Q16b)

Fort Bragg		Fort Carson		Fort Hood		Fort	Lewis	Total	
No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
0	(0.0)	3	(4.0)	1	(0.8)	1	(1.4)	5	(1.4)
9	(12.7)	20	(26.3)	24	(18.9)	14	(19.2)	67	(19.3)
8	(11.2)	3	(4.0)	9	(7.1)	7	(9.6)	27	(7.8)
10	(14.1)	15	(19.7)	21	(16.5)	9	(13.3)	55	(15.9)
21	(29.6)	18	(23.7)	25	(19.7)	10	(13.7)	74	(21.3)
	No. 0 9 8 10	No. (%) 0 (0.0) 9 (12.7) 8 (11.2) 10 (14.1)	No. (%) No. 0 (0.0) 3 9 (12.7) 20 8 (11.2) 3 10 (14.1) 15	No. (%) No. (%) 0 (0.0) 3 (4.0) 9 (12.7) 20 (26.3) 8 (11.2) 3 (4.0) 10 (14.1) 15 (19.7)	No. (%) No. (%) No. 0 (0.0) 3 (4.0) 1 9 (12.7) 20 (26.3) 24 8 (11.2) 3 (4.0) 9 10 (14.1) 15 (19.7) 21	No. (%) No. (%) No. (%) 0 (0.0) 3 (4.0) 1 (0.8) 9 (12.7) 20 (26.3) 24 (18.9) 8 (11.2) 3 (4.0) 9 (7.1) 10 (14.1) 15 (19.7) 21 (16.5)	No. (%) No. (%) No. (%) No. 0 (0.0) 3 (4.0) 1 (0.8) 1 9 (12.7) 20 (26.3) 24 (18.9) 14 8 (11.2) 3 (4.0) 9 (7.1) 7 10 (14.1) 15 (19.7) 21 (16.5) 9	No. (%) No. (%) No. (%) No. (%) 0 (0.0) 3 (4.0) 1 (0.8) 1 (1.4) 9 (12.7) 20 (26.3) 24 (18.9) 14 (19.2) 8 (11.2) 3 (4.0) 9 (7.1) 7 (9.6) 10 (14.1) 15 (19.7) 21 (16.5) 9 (13.3)	No. (%) No.

119

Table 4. Self-rated proficiency of experience combat medics in surfing the Internet. (Q16c)

(32.4)

Proficient, no assistance needed

	Fort	Bragg	Fort	Carson	Fort	Hood	Fort	Lewis	То	tal
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)_
Missing	0	(0.0)	3	(4.0)	1	(0.8)	1	(1.4)	5	(1.4)
Unable to perform	13	(18.3)	21	(27.6)	26	(20.5)	17	(23.3)	77	(22.2)
Perform w/continuous assistance	8	(11.3)	4	(5.3)	9	(7.1)	3	(4.1)	24	(6.9)
Perform w/moderate assistance	6	(8.5)	14	(18.4)	19	(15.0)	10	(13.7)	49	(14.1)
Perform w/minimal assistance	17	(23.9)	11	(14.5)	21	(16.5)	11	(15.1)	60	(17.3)
Proficient, no assistance needed	27	(38.0)	23	(30.3)	51	(40.2)	31	(42.5)	132	(38.0)

Table 5. Self-rated proficiency of experience combat medics in operating hospital automated systems such as CHCS (Composite Health Care System). (Q16d)

	Fort Bragg		Fort Carson		Fort Hood		Fort	Lewis	Total	
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Missing	0	(0.0)	3	(4.0)	1	(8.0)	1	(1.4)	5	(1.4)
Unable to perform	25	(35.2)	35	(46.1)	61	(48.0)	34	(46.6)	155	(44.7)
Perform w/continuous assistance	7	(9.9)	6	(7.9)	1	(10.2)	83	(11.0)	34	(9.8)
Perform w/moderate assistance	8	(11.3)	9	(11.8)	17	(13.4)	13	(17.8)	47	(13.5)
Perform w/minimal assistance	14	(19.7)	12	(15.8)	15	(11.8)	5	(6.9)	46	(13.3)
Proficient, no assistance needed	17	(23.9)	11	(14.5)	20_	(15.8)	12	(16.4)	60	(17.3)

Table 6 summarizes the numbers and types of computer systems experienced combat medics reported as available for them to use in their unit. Note that the computer counts are for the total number of 386s, 486s, and pentium models that are available in a medic's unit. Information on the number of computers with LAN/Modem, Internet access, or CD-ROMs was not requested in the survey. About 50% of all surveys had no reponse for the number of computers available, which may have been from confusion on whether the count was for all computers or only for those with features such as "With Internet."

Overall, for each of the three computer models, approximately 16% of experienced combat medics reported that no computers were available in their units for them to use. Other responses ranged from 1 to 50 computers being available, but only a few medics (less than 2%) reported having more than three computers in the unit available for their use. Overall and by study location, less than 10% of experienced combat medics reported having 386 or 486 computers with LAN/modem, Internet access, or CD-Rom features. However, between 10-13% of all medics reported having Pentiums with these features, while by study location, the highest percentage of medics reporting a feature was at Fort Bragg, where 18.2% reported having the LAN/modem feature.

Table 6. Distribution of experienced combat medics' responses to question on computer systems available for them to use in their unit. (Q50)

		Number	of Med	lics Respo	nding b	y Study L	ocation			
	Fort	Bragg	Fort	Carson	Fort	Hood	Fort	Lewis	To	
Computer Description	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
386 Computers (Q50a)										
Number of computers										
Missing	53	(74.7)	54	(71.1)	84	(66.1)	52	(71.2)	243	(70.0)
0	12	(16.9)	12	(15.8)	21	(16.5)	12	(16.4)	57	(16.4)
1	5	(7.0)	8	(10.5)	13	(10.2)	4	(5.5)	30	(8.6)
2	0	(0.0)	0	(0.0)	3	(2.4)	2	(2.7)	5	(1.4)
3	1	(1.4)	0	(0.0)	4	(3.2)	1	(1.4)	6	(1.7)
4	0	(0.0)	0	(0.0)	1	(8.0)	1	(1.4)	2	(0.6)
6	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.4)	1	(0.3)
7	0	(0.0)	1	(1.3)	0	(0.0)	0	(0.0)	1	(0.3)
9	0	(0.0)	0	(0.0)	1	(0.8)	0	(0.0)	1	(0.3)
12	0	(0.0)	1	(1.3)	0	(0.0)	0	(0.0)	1	(0.3)
With LAN/Modem										
Missing	22	(31.0)	27	(35.5)	47	(37.0)	14	(19.2)	110	(31.7)
Unknown	18	(25.4)	16	(21.1)	23	(18.1)	20	(27.4)	77	(22.2)
Yes	3	(4.2)	5	(6.6)	11	(8.7)	6	(8.2)	25	(7.2)
No	28	(39.4)	28	(36.8)	46	(36.2)	33	(45.2)	135	(38.9)
With Internet										
Missing	22	(31.0)	27	(35.5)	49	(38.6)	20	(27.4)	118	(34.0)
Unknown	19	(26.8)	21	(27.6)	35	(27.6)	22	(30.1)	97	(28.0)
Yes	5	(7.0)	2	(2.6)	8	(6.3)	7	(9.6)	22	(6.3)
No	25	(35.2)	26	(34.2)	35	(27.6)	24	(32.9)	110	(31.7)
With CD-ROM										
Missing	22	(31.0)	27	(35.5)	49	(38.6)	20	(27.4)	118	(34.0)
Unknown	19	(26.8)	22	(29.0)	32	(25.2)	22	(30.1)	95	(27.4)
Yes	4	(5.6)	2	(2.6)	9	(7.1)	4	(5.5)	19	(5.5)
No	26	(36.6)	25	32.9	37	29.1	27	(37.0)	115	(33.1)
486 Computers (Q50b)										
Number of computers										
Missing	52	(73.2)	56	(73.7)	90	(70.9)	58	(79.5)	256	(73.8)
0	11	(15.5)	10	(13.2)	20	(15.8)	13	(17.8)	54	(15.6)
1	7	(9.9)	8	(10.5)	14	(11.0)	1	(1.4)	30	(8.6)
2	ó	(0.0)	1	(1.3)	1	(0.8)	ō	(0.0)	2	(0.6)
3	1	(1.4)	ō	(0.0)	1	(0.8)	Ö	(0.0)	2	(0.6)
4	Ō	(0.0)	1	(1.3)	ō	(0.0)	Ö	(0.0)	1	(0.3)
9	0	(0.0)	ō	(0.0)	1	(0.8)	ő	(0.0)	ī	(0.3)
50	0	(0.0)	Ö	(0.0)	ō	(0.0)	1	(1.4)	1	(0.3)

Table 6. Distribution of experienced combat medics' responses to question on computer systems available

for them to use in their unit. (Q50) (continued)

		Number of Medics Responding by Study Location Fort Bragg Fort Carson Fort Hood Fort Lewis								
Computer System		Bragg		Carson				Lewis	To	
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
486 Computers (Q50b)										
With LAN/Modem										
Missing	21	(29.6)	29	(38.2)	47	(37.0)	24	(32.9)	121	(34.9)
Unknown	19	(26.8)	17	(22.4)	24	(18.9)	19	(26.0)	79	(22.8)
Yes	3	(4.2)	3	(4.0)	11	(8.7)	1	(1.4)	18	(5.2)
No	28	(39.4)	27	(35.5)	45	(35.4)	29	(39.7)	129	(37.2)
With Internet										
Missing	22	(31.0)	29	(38.2)	51	(40.2)	30	(41.1)	132	(38.0)
Unknown	20	(28.2)	21	(27.6)	33	(26.0)	19	(26.0)	93	(26.8)
Yes	5	(7.0)	0	(0.0)	6	(4.7)	3	(4.1)	14	(4.0)
No	24	(33.8)	26	(34.2)	37	(29.1)	21	(28.8)	108	(31.1)
With CD-ROM										
Missing	22	(31.0)	30	(39.5)	50	(39.4)	31	(42.5)	133	(38.3)
Unknown	19	(26.8)	19	(25.0)	33	(26.0)	19	(26.0)	90	(25.9)
Yes	4	(5.6)	4	(5.3)	7	(5.5)	1	(1.4)	16	(4.6)
No	26	(36.6)	23	(30.3)	37	(29.1)	22	(30.1)	108	(31.1)
Pentiums (Q50c)										
Number of computers										
Missing	48	(67.6)	54	(71.1)	91	(71.7)	51	(69.9)	244	(70.3)
0	9	(12.7)	10	(13.2)	23	(18.1)	13	(17.8)	55	(15.9)
1	8	(11.3)	7	(9.2)	7	(5.5)	5	(6.9)	27	(7.8)
2	3	(4.2)	2	(2.6)	5	(3.9)	2	(2.7)	12	(3.5)
3	1	(1.4)	3	(4.0)	0	(0.0)	0	(0.0)	4	(1.2)
7	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.4)	1	(0.3)
10	1	(1.4)	0	(0.0)	0	(0.0)	0	(0.0)	1	(0.3)
22	0	(0.0)	0	(0.0)	1	(0.8)	0	(0.0)	1	(0.3)
50	0	(0.0)	0	(0.0)	0	(0.0)	1	(1.4)	1	(0.3)
With LAN/Modem										
Missing	15	(21.1)	25	(32.9)	46	(36.2)	18	(24.7)	104	(30.0)
Unknown	16	(22.5)	18	(23.7)	23	(18.1)	19	(26.0)	76	(21.9)
Yes	13	(18.3)	8	(10.5)	16	(12.6)	6	(8.2)	43	(12.4)
No	27	(38.0)	25	(32.9)	42	(33.1)	30	(41.1)	124	(35.7)
With Internet										
Missing	16	(22.5)	25	(32.9)	52	(40.9)	27	(37.0)	120	(34.6)
Unknown	23	(32.4)	22	(29.0)	28	(22.1)	18	(24.7)	91	(26.2)
Yes	10	(14.1)	4	(5.3)	12	(9.5)	9	(12.3)	35	(10.1)
No	22	(31.0)	25	(32.9)	35	(27.6)	19	(26.0)	101	(29.1)
With CD-ROM										
Missing	17	(23.9)	24	(31.6)	50	(39.4)	26	(35.6)	117	(33.7)
Unknown	20	(28.2)	18	(23.7)	24	(18.9)	19	(26.0)	81	(23.3)
Yes	11	(15.5)	10	(13.2)	16	(12.6)	8	(11.0)	45	(13.0)
No	23	(32.5)	24	(31.6)	37	(29.1)	20	(27.4)	104	(30.0)

Phase I: Direct-Line Supervisors (n=255)

Direct-line supervisors of experienced combat medics were asked questions concerning the computer proficiency of—and computer resources available to—combat medics in their unit. Their responses applied to an average medic in their unit rather than to a specific individual. Over half of the direct-line supervisors reported that combat medics required more than minimal assistance on each of the four listed computer skills. Medic proficiency in operating hospital

automated systems rated the lowest, with 68.6% of the direct-line supervisors reporting their combat medics needed more than minimal assistance to perform this task. The supervisors rated the combat medics as most proficient in using word processing programs with 40% of the supervisors reporting their medics as needing minimal or no assistance.

Table 7. Distribution of direct-line supervisors' responses on proficiency of experienced 91B10 combat

medics in perfoming computer skills in their units (Q7a-d).

Response		-mail to Rcv Msgs (%)		Processing ograms (%)		Surf nternet (%)	•	Hospital Systems (%)
Missing	14	(5.5)	10	(3.9)	14	(5.5)	12	(4.7)
Unable to perform	91	(35.7)	38	(14.9)	72	(28.2)	103	(40.4)
Perform w/continuous assistance	37	(14.5)	46	(18.0)	35	(13.7)	27	(10.6)
Perform w/moderate assistance	32	(12.5)	59	(23.1)	43	(16.9)	45	(17.6)
Perform w/minimal assistance	42	(16.5)	73	(28.6)	40	(15.7)	39	(15.3)
Proficient, no assistance needed	39	(15.3)	29	(11.4)	51	(20.0)	29	(11.4)

Many of the direct-line supervisors did not answer the questions concerning computer systems available to the combat medics in their unit (Tables 8-9). Approximately 60% of the responses were missing for the 386 and 486 computers, while 46% of the responses were missing for the pentium computers (Table 8). For each of the computer models, more than 10% of the supervisors reported that no computers of that model were available to their medics; 17.3% reported no 386s, 16.1% no 486s, and 14.5% reported no pentiums. Most supervisors who provided counts of available computers, reported from 1 to 3 of each model. Three out of 255 supervisors reported 100 pentium computers available for medic use—the largest number of single type computers reported. LAN/modem, Internet access, and CD-ROM features were reported more often for the pentium models than for the 386s and 486s (Table 9): about 32% of the supervisors indicated these features were available on pentiums, compared to about 12% reporting them on the 486s and 7% on the 386s.

Tables 8. Direct-line supervisors' responses on number of computers available to 91B10 medics in their unit. (Q50)

Number of 386s	•	rvisors onsing (%)	Number of 486s	•	rvisors onding (%)	Number of Pentiums		rvisors onding (%)
Missing	157	(61.6)	Missing	157	(61.6)	Missing	118	(46.3)
0	44	(17.3)	0	41	(16.1)	0	37	(14.5)
1	31	(12.2)	1	26	(10.2)	1	57	(22.4)
2	15	(5.9)	2	18	(7.1)	2	12	(4.7)
3	3	(1.2)	3	5	(2.0)	3	18	(7.1)
5	1	(0.4)	4	1	(0.4)	4	2	(0.8)
10	2	(0.8)	5	2	(0.8)	6	1	(0.4)
20	2	(0.8)	6	1	(0.4)	7	1	(0.4)
	_		9	1	(0.4)	10	3	(1.2)
			10	1	(0.4)	12	2	(0.8)
			50	2	(0.8)	50	1	(0.4)
						100	3	(1.2)

Tables 9. Direct-line supervisors' responses on computer features available to 91B10 medics in their unit. (Q50)

		Number of Supervisors Responding									
	Computer:	3	86s		86s	Pentiums					
Feature		No.	(%)	No.	(%)	No.	(%)				
With LAN/Modem											
Missing		153	(60.0)	150	(58.8)	115	(45.1)				
Unknown		58	(22.7)	43	(16.9)	37	(14.5)				
Yes		20	(7.8)	38	(14.9)	80	(31.4)				
No		24	(9.4)	24	(9.4)	23	(9.0)				
With Internet											
Missing		152	(59.6)	153	(60.0)	113	(44.3)				
Unknown		64	(25.1)	54	(21.2)	45	(17.6)				
Yes		17	(6.7)	26	(10.2)	75	(29.4)				
No		22	(8.6)	22	(8.6)	22	(8.6)				
With CD-ROM											
Missing		151	(59.2)	152	(59.6)	110	(43.1)				
Unknown		60	(23.5)	50	(19.6)	31	(12.2)				
Yes		17	(6.7)	27	(10.6)	89	(34.9)				
No		27	(10.6)	26	(10.2)	25	(9.8)				

Phase III: New Combat Medics (n=127)

Tables 10-13 summarize the responses concerning new medics' perceptions of their computer proficiency. Overall, at least half of all new medics rated themselves as needing minimal or no assistance in performing three of the given computer skills: 56.7% in using E-mail (Table 10); 61.4% in word processing (Table 11); and 63.0% in using Internet (Table12). However, only 14.1% of all new medics rated themselves as able to operate hospital automated systems with minimal or no assistance (Table 13). Also, overall, more than a third of new medics felt they needed more than minimal assistance: 43.3%, E-mail;, 38.6%, word processing; 36.9%, Internet; and 85.9%, hospital automated systems. There was a lot of variation in responses by study location, epecially for proficiency in using E-mail: the percentage of new medics rating themselves as needing minimal or no assistance ranged from 38.4% at Fort Bragg to 81.8% at Fort Lewis. More than 75% of new medics at all locations rated themselves as needing more than minimal assistance in operating hospital automated systems: from 75.1% at Fort Carson to 95.5% at Fort Lewis.

Table10. Self-rated proficiency of new combat medics in using E-mail to send/receive messages (Q6a).

Desmana		Bragg (%)	Fort No.	Carson (%)	Fort No.	Hood (%)	Fort No.	Lewis (%)	To No.	tal (%)_
Response	No.	(70)	IVU.	(70)	110,	(70)	110.	(70)	110.	(70)
Unable to perform	12	(46.2)	4	(25.0)	12	(19.1)	1	(4.6)	29	(22.8)
Perform w/continuous assistance	0	(0.0)	0	(0.0)	6	(9.5)	3	(13.6)	9	(7.1)
Perform w/moderate assistance	4	(15.4)	5	(31.3)	8	(12.7)	0	(0.0)	17	(13.4)
Perform w/minimal assistance	3	(11.5)	1	(6.3)	15	(23.8)	7	(31.8)	26	(20.5)
Proficient, no assistance needed	7	(26.9)	6	(37.5)	22	(34.9)	11	(50.0)	46	(36.2)

Table11. Self-rated proficiency of new combat medics in using word processing programs such as Word or WordPerfect. (Q6b)

Response	Fort No.	Bragg (%)	Fort No.	Carson (%)	Fort No.	Hood (%)	Fort No.	Lewis (%)	To No.	tai (%)
	0		2				1			
Unable to perform	B	(30.8)	2	(12.5)	12	(19.1)	Ť	(4.6)	23	(18.1)
Perform w/continuous assistance	2	(7.7)	1	(6.3)	4	(6.4)	2	(9.1)	9	(7.1)
Perform w/moderate assistance	4	(15.4)	5	(31.3)	6	(9.5)	2	(9.1)	17	(13.4)
Perform w/minimal assistance	6	(23.1)	5	(31.3)	9	(14.3)	6	(27.3)	26	(20.5)
Proficient, no assistance needed	6	(23.1)	3	(18.8)	32	(50.8)	11	(50.0)	52	(40.9)

Table 12. Self-rated proficiency of new combat medics in surfing the Internet. (Q6c)

	Fort Bragg		Fort Carson		Fort Hood		Fort Lewis		Total	
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Unable to perform	9	34.6	2	12.5	7	11.1	2	9.1	20	(15.7)
Perform w/continuous assistance	2	7.7	0	0.0	4	6.4	1	4.6	7	(5.5)
Perform w/moderate assistance	2	7.7	5	31.3	11	17.5	2	9.1	20	(15.7)
Perform w/minimal assistance	3	11.5	3	18.8	14	22.2	3	13.6	23	(18.1)
Proficient, no assistance needed	10_	38.5	6	37.5	27	42.9	14	63.6	57	(44.9)

Table 13. Self-rated proficiency of new combat medics in operating hospital automated systems such as CHCS (Composite Health Care System). (Q6d)

	Fort	Fort Bragg		Fort Carson		Fort Hood		Fort Lewis		tal
Response	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Unable to perform	16	61.5	9	56.3	35	55.6	14	63.6	74	(58.3)
Perform w/continuous assistance	5	19.2	1	6.3	9	14.3	1	4.6	16	(12.6)
Perform w/moderate assistance	2	7.7	2	12.5	9	14.3	6	27.3	19	(15.0)
Perform w/minimal assistance	2	7.7	2	12.5	7	11.1	1	4.6	12	(9.4)
Proficient, no assistance needed	1	3.9	2	12.5	3	4.8	0	0.0	6	(4.7)

Table 14 summarizes the numbers and types of computer systems new combat medics reported as available for them to use in their unit. Note that the computer counts are for the total number of 386s, 486s, and pentium models that are available in a medic's unit. Information on the number of computers with LAN/Modem, Internet access, or CD-ROMs was not requested in the survey. About 21% of all surveys had no reponse for the number of computers available, which may have been from confusion on whether the count was for all computers or only for those with features such as "With Internet."

Overall, for each of the three computer models, more than 60% of new combat medics reported that no computers were available in their unit for their use. Other responses ranged from 1 to 20 computers, but only a few medics (less than 3%) reported having more than three available to them in the unit. Overall, no more than 11% of new combat medics reported having any computer model with LAN/modem, Internet access, or CD-Rom features. By study location, the highest percentage of medics reporting a feature was at Fort Bragg, where 15.4% reported having the CD-ROM feature.

Table 14. Distribution of new combat medics' responses to question on computer systems available for them to use in their unit (Q48).

			of Med	lics Respo	ndina b	y Study L	ocation	<u> </u>		
		Bragg	Fort Carson			t Hood	Fort Lewis			tal
Computer Description	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
386 Computers (Q48a)										
Number of computers										
Missing	0	(0.0)	0	(0.0)	28	(44.4)	0	(0.0)	28	(22.0)
0	22	(84.6)	15	(93.8)	26	(41.2)	19	(86.4)	82	(64.6)
1	2	(7.7)	1	(6.3)	5	(7.9)	1	(4.6)	9	(7.1)
2	2	(7.7)	0	(0.0)	2	(3.2)	1	(4.6)	5	(3.9)
4	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.6)	1	(0.8)
9	Ō	(0.0)	Ö	(0.0)	1	(1.6)	ō	(0.0)	1	(0.8)
20	Õ	(0.0)	ō	(0.0)	1	(1.6)	Ō	(0.0)	1	(0.8)
With LAN/Modem	ŭ	(0.0)	•	(0.0)	-	(1.0)	•	(0.0)	-	(0.0)
Unknown	11	(42.3)	6	(37.5)	16	(25.4)	6	(27.3)	39	(30.7)
Yes	1	(3.9)	1	(6.3)	2	(3.2)	1	(4.6)	5	(3.9)
No	_	(53.9)	_	(56.3)	45	(71.4)	15		83	(65.4)
	14	(33.5)	,	(30.3)	75	(/11)	13	(00.2)	03	(03.1)
<u>With Internet</u> Unknown	12	(46.2)	6	(37.5)	18	(28.6)	6	(27.3)	42	(33.1)
	0				3	(4.8)	2	(9.1)	6	(4.7)
Yes		(0.0)	1	(6.3) (56.3)	42	(66.7)	14		79	(62.2)
No	14	(53.9)	9	(50.5)	42	(00.7)	14	(03.0)	79	(02.2)
With CD-ROM	42	(46.3)	_	(27 F)	4.4	(22.2)	7	(24.0)	20	(20.7)
Unknown		(46.2)		(37.5)		(22.2)		(31.8)	39	(30.7)
Yes	. 0	(0.0)	1	(6.3)	6	(9.5)	2	(9.1)	9	(7.1)
No	14	(53.9)	9	(56.3)	43	(68.30	13	(59.1)	79	(62.2)
40401										
486 Computers (Q48b)										
Number of computers	•	(0.0)	•	(0.0)	26	(44.3)		(0.0)	20	(20 F)
Missing	0	(0.0)	0	(0.0)		(41.3)	0	(0.0)	26	(20.5)
0		(88.5)	15	(93.8)	30	(47.6)	21	(95.5)	89	(70.1)
1	0	(0.0)	1	(6.3)	3	(4.8)	1	(4.6)	5	(3.9)
2		(11.5)	0	(0.0)	2	(3.2)	0	(0.0)	5	(3.9)
6	0	(0.0)	0	(0.0)	1	(1.6)	0	(0.0)	1	(0.8)
20	0	(0.0)	0	(0.0)	1	(1.6)	0	(0.0)	1	(0.8)
With LAN/Modem										
Unknown		(42.3)	6	(37.5)	16	(25.4)	6	(27.3)	39	(30.7)
Yes	0	(0.0)	1	(6.3)	3	(4.8)	0	(0.0)	4	(3.1)
No	15	(57.7)	9	(56.3)	44	(69.8)	16	(72.7)	84	(66.1)
With Internet										
Unknown	11	(42.3)	6	(37.5)	19	(30.2)	8	(36.6)	44	(34.6)
Yes	0	(0.0)		(6.3)	4	(6.4)	0	(0.0)	5	(3.9)
No	15	(57.7)	9	(56.3)	40	(63.5)	14	(63.6)	78	(61.4)
With CD-ROM										
Unknown	11	(42.3)	7	(43.8)	17	(27.0)	9	(40.9)	44	(34.6)
Yes	0	(0.0)	0	(0.0)	4	(6.4)	0	(0.0)	4	(3.1)
No	15	(Š 7.7)	9	(56.3)	42	(66.7)	13	(59.1)	79	(62.2)
				-						
Pentiums (Q48c)										
Number of computers			•							
Missing	.0	(0.0)	0	(0.0)	29	(46.0)	0	(0.0)		(22.8)
0	20	(76.9)	14	(87.5)	25	(39.7)	19	(86.4)	78	(61.4)
1	1	(3.9)	0	(0.0)	4	(6.4)	2	(9.1)	7	(5.5)
2	3	(11.5)	1	(6.3)	2	(3.2)	0	(0.0)	6	(4.7)
3	1	(3.9)	1	(6.3)	2	(3.2)	1	(4.6)	5	(3.9)
4	1	(3.9)	0	(0.0)	0	(0.0)	0	(0.0)	1	(0.8)
6	0	(0.0)	0	(0.0)	1	(1.6)	0	(0.0)	1	(0.8)

Table 14. Distribution of new combat medics' responses to question on computer systems available for them to use in their unit (Q48) (continued).

		Number of Medics Responding by Study Location										
	Fort	Fort Bragg		Fort Carson		Fort Hood		Lewis	To	tai		
Computer Description	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)		
Pentiums (Q48c)												
With LAN/Modem												
Unknown	10	(38.5)	6	(37.5)	13	(20.6)	7	(31.8)	36	(28.3)		
Yes	2	(7.7)	1	(6.3)	3	(4.7)	3	(13.6)	9	(7.1)		
No	14	(53.9)	9	(56.3)	47	(74.6)	12	(54.6)	82	(64.6)		
With Internet		, ,										
Unknown	10	(38.5)	5	(31.3)	17	(27.0)	7	(31.8)	39	(30.7)		
Yes	3	(11.5)	2	(12.5)	3	(4.8)	3	(13.6)	11	(8.7)		
No	13	(50.0)	9	(56.3)	43	(68.3)	12	(54.6)	77	(60.6)		
With CD-ROM		, ,										
Unknown	9	(34.6)	6	(37.5)	14	(22.2)	8	(36.4)	37	(29.1)		
Yes	4	(15.4)	1	(6.3)	6	(9.5)	3	(13.6)	14	(11.0)		
No	13	(50.0)	9	(56.3)	43	(68.3)	11	(50.0)	76	(59.8)		

DISTRIBUTION LIST

- Academy or Health Sciences, Stimson Library, ATTN: MCCS-HSL, Bldg 2840, Fort Sam Houston, TX 78234-6100 (1)
- Brooke Army Medical Center, Medical Library, ATTN: MCHE-CSL, Bldg 3600, 3851 Roger Brooke Dr, Fort Sam Houston, TX 78234-6200 (1)
- LTC David Gilbertson, MCCS-HRL, Suite 2402, Building 2841, Fort Sam Houston, TX 78234 (2)
- LTC Brian Allgood, Department 1385, 232 Medical Battalion, Fort Sam Houston, TX 78234 (1)
- COL Michael Pasquarella, MCCS-HM, Suite 1229, Building 2841, Fort Sam Houston, TX 78234 (1)
- Mr. William Lesjak, MCCS-H, Suite 302, Building 2840, Fort Sam Houston, TX 78234 (1)